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ENTOMOLOGY.—*Ten new West Indian scarab beetles of the genus Phyllophaga, with two new names.*¹ LAWRENCE W. SAYLOR, U. S. Bureau of Biological Survey. (Communicated by E. A. CHAPIN.)

The species described as new in this paper further enlarge our knowledge of the relatively numerous species of June beetles known from the West Indies. For the privilege of studying the majority of these new species I am indebted to Dr. E. A. Chapin, of the United States National Museum.

Phyllophaga (Phyllophaga) bimammifrons, n. sp. Fig. 2

Male.—Elongate, shining, glabrous above; head piceous, thorax and legs rufotestaceous, otherwise testaceous above. Clypeus with moderately fine punctures, these dense at center of disk but nearly absent along apical margin of clypeus; clypeal margin slightly reflexed, narrowly and shallowly incised at middle, the angles very broadly rounded; underside of outer apical margin with a single row of punctures, each bearing a long hair, which curves up and back over the clypeal apex. Front with two moderately separated mammilliform tubercles; apical half of disk of the front with fine, sparse, and irregularly placed punctures, basal half of disk and vertex with very dense and extremely fine punctures and several larger intercalated punctures. Antenna 9-segmented, club not quite equal in length to the four preceding segments. Thorax with sides entire, with a few cilia near the apical angles, both hind and fore angles rounded, base and apex with strong, complete margins, punctures of disk of moderate size, rather regularly placed and separated by one to two times their diameters, the center of disk with a small irregular, impunctate area. Elytron with sutural stria obsolete at base and apex, other striae absent; disk subrugose, punctures slightly smaller than those of thorax and less densely placed. Pygidium convex, subrugose, with fine, regularly placed punctures, separated by about two times their diameters and each bearing a short, erect hair. Abdomen convex, polished, fifth sternite sparsely punctured; sixth sternite three-fifths as wide as the preceding, slightly transversely impressed and with fine, moderately dense, setigerous punctures. Claws with a strong median tooth, claw base obtusely dilated.

Female.—Antennal club equal to the three preceding segments; pygidial puncturation somewhat coarser than in male, and disk somewhat tumid before apex; abdomen with the sixth sternite flat. Otherwise as in the male.

Length, 21-23 mm. Width, 11-12 mm.

The type series consists of 12 males and 8 females, 10 from "Sta. Fe, I. de Pines, Cuba, A. R. Otero collector, March 1939 (E.E.A. Cuba Ento. No.

¹ Received February 9, 1940.

11013)" and 10 from the same locality collected March 21, 1939. The *holotype* (U.S.N.M. no. 54014), *allotype*, and designated paratypes are in the United States National Museum; paratypes also have been returned to S. C. Bruner, who kindly sent the series for study, and others have been deposited in the Saylor Collection.

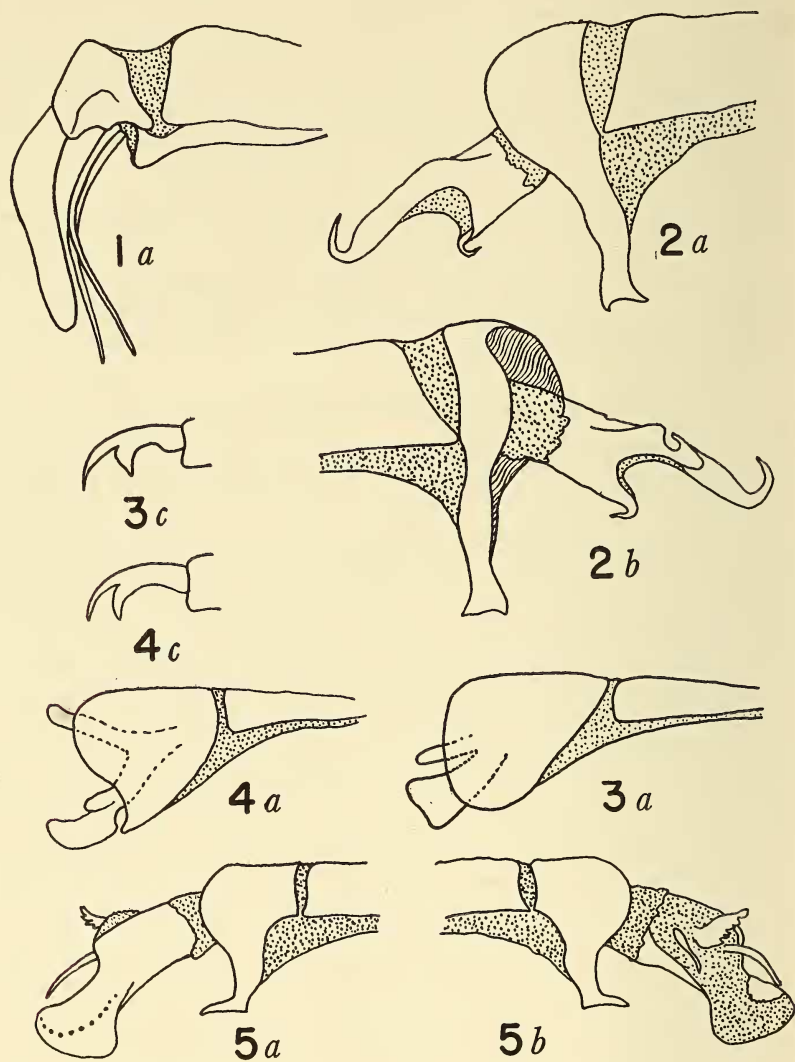


Fig. 1.—*Phyllophaga adjuntas*, n. sp. Fig. 2.—*Phyllophaga bimammifrons*, n. sp.
Fig. 3.—*Phyllophaga cneda*, n. sp. Fig. 4.—*Phyllophaga blackwelderi*, n. sp. Fig. 5.—*Phyllophaga bahama*, n. sp. a, and b, Lateral view of male genitalia. c, Tarsal claw.

P. bimammifrons is most closely related to *P. tuberculifrons* (Chev.), with which species it has in common the bimammillate front, but it may be readily separated by the more median tooth of the tarsal claw and the very different male genitalia. In this new species only the females have the smooth

reniform impression adjacent to each eye that Chapin describes for *tuberculifrons*; in the males the area is punctate to the eye margin.

Phyllophaga (Phyllophaga) wolcotti, n. sp.

Fig. 10

Male.—Elongate, testaceo-ochreous to testaceopiceous, head and greater part of the thoracic disk piceous, legs rufopiceous; upper surface pruinose, dull, glabrous. Head with clypeus polished, very sparsely punctate, apex narrowly and shallowly emarginate, angles very broadly rounded. Front pruinose, with sparse, small, irregularly placed, umbilicate punctures, vertex and occiput polished and impunctate. Antenna 9-segmented, club oval, equal to or slightly longer than the preceding three segments. Thorax with small, irregularly placed, umbilicate punctures, separated by one to two or more times their diameters; lateral margins entire, angles well marked but obtuse, base entirely margined. Elytron with sutural stria obsolete basally and apically; disk subrugose, with punctures of same size and density as those of the thorax. Pygidium convex, polished, glabrous, with small, moderately dense umbilicate punctures. Abdomen slightly convex, with very fine punctures, glabrous or nearly so at middle, fifth sternite long and with sparse transverse punctures; sixth sternite one-third the length of the preceding, with a deep transverse sulcus, surface hardly punctate. Claws with a strong median tooth, which is long and as strong as the apical one; claw base angularly dilated. Metasternal hairs of moderate thickness. Propygidium strongly polished but with several very minute punctures visible.

Female.—All characters as in the male except that the sixth ventral abdominal sternite is much less strongly impressed and the antennal club is a little shorter.

Length, 23–24.5 mm. Width, 11–12.5 mm.

The *holotype* (U.S.N.M. no. 54015), *allotype*, and 2 paratypes are from "El Yunque, Porto Rico," collected by G. N. Wolcott on April 6, 1939. An additional pair of paratypes are from "Mts. N. of Yauco, P. Rico, IV-20-36, coll. by R. G. Oakley." The holotype, allotype, and a paratype are in the United States National Museum; a pair of paratypes is in the collection of Wolcott, and one paratype has been deposited in the Saylor Collection.

The species is named in honor of G. N. Wolcott, who has contributed much to our knowledge of Puerto Rican melolonthids and who transmitted part of the specimens for description. *P. wolcotti* is most closely related to *P. yunqueana* Chapin, but besides the quite different male genitalia, it may be separated by the darker color, less densely punctate head, nontumid clypeus, and shorter antennal club.

Phyllophaga (Phyllophaga) spinifemora, n. sp.

Fig. 6

Male.—Oblong oval, shining, glabrous above; pale testaceous, the head and legs varying to rufotestaceous. Clypeus short, densely punctured, apex widely and moderately deeply emarginate, almost bilobed, angles well rounded, margin hardly reflexed. Front with very dense punctures of moderate size, with or without an indication of a slightly impressed, longitudinal sulcus; vertex polished, impunctate. Eyes rather large. Antenna testaceous, apparently 8-segmented, the fourth segment as long as the second and third combined and widened at the middle; fifth segment one-third as long as the preceding; club equal to funicle in length. Thorax with regularly placed punctures of moderate size, separated by one and one-half to two times their diameters, somewhat closer along the front margin and near sides; sides rounded, angles blunt, lateral margins entire, with very short cilia; hind marginal line absent. Elytron with sutural stria ill-defined, hardly raised,

and punctate; disk subrugose, with moderately dense punctures. Pygidium convex, polished, either glabrous or with a few short and erect hairs, and with regularly placed moderate to rather large punctures, the punctures separated by one to two times their diameters. Abdomen polished, slightly convex; fifth sternite slightly transversely impressed, the apical margin at middle prolonged into a slight though evident lobe; sixth sternite one-third as long as fifth, transversely impressed and punctate. Claws short, with a stubby triangular tooth at the middle. Upper tooth of front tibia well defined. First two segments of hind tarsus equal in length. Hind femur with a single

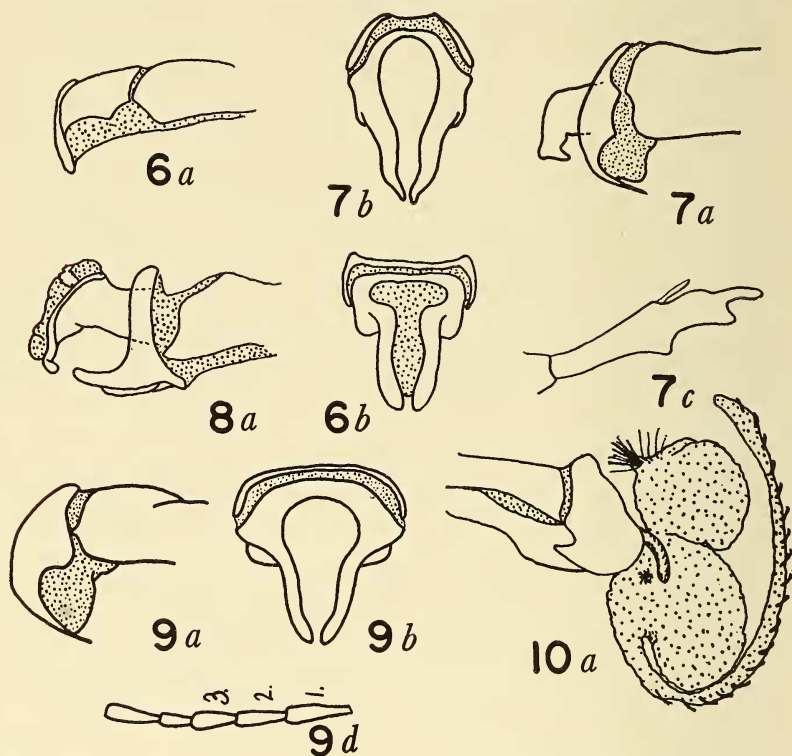


Fig. 6.—*Phyllophaga spinifemora*, n. sp. Fig. 7.—*Phyllophaga manchesterea*, n. sp.
Fig. 8.—*Phyllophaga pseudocalcaris*, n. sp. Fig. 9.—*Phyllophaga mandevillea*, n. sp.
Fig. 10.—*Phyllophaga wolcottii*, n. sp. a, Lateral view of male genitalia. b, En face
view of male genitalia. c, Front tibia. d, Dorsal view of front tarsus.

row of 6 to 10 backwardly projecting, short stubby spines well inside of, but parallel to, the hind margin. Spurs free, the longest longer than the first tarsal segment. Metasternum nearly glabrous at center, sides coarsely punctate and the hair very short and scarcely obvious.

Length, 10–10.5 mm. Width, 5–5.5 mm.

The *holotype* (U.S.N.M. no. 54016) and 6 paratypes, all males, were collected by E. A. Chapin and R. E. Blackwelder at Santa Cruz, Jamaica, February 24, 1937, "flying at dusk." The type material, except for a pair in the Saylor Collection, is in the National Museum collection. This species is quite distinct from all West Indian species known to me and is not closely related to any of the known Jamaican species.

Phyllophaga (Phyllophaga) pseudocalcaris, n. sp. Fig. 8

Male.—Oblong-oval, shining; head and elytra with sparse and scattered short hairs, otherwise glabrous above; color testaceous to testaceopiceous, with dark castaneous cloudings on greater part of the head, thoracic disk, and on the elytral apices—entire dorsal surface in some lights with a faint metallic sheen. Clypeus short, almost rounded, but very transverse, apex not reflexed and hardly emarginate, disk densely and somewhat coarsely punctate. Front with moderately coarse, irregularly placed, moderately dense, and variolate punctures. Antenna 9-segmented, testaceous, club ovate and subequal to the preceding four segments in length. Thorax with moderately coarse, somewhat regularly placed variolate punctures, separated by one to three times their diameters; sides roundly dilated, margins entire, with sparse, short cilia; angles blunt, base margined only at sides. Elytron with moderately dense and regularly placed punctures of moderate size, surface smooth, some of the punctures with a very short scarcely obvious hair; an oblique, strialike, impunctate but not raised line on the disk, which is otherwise not striate. Pygidium convex, rugose, with moderately dense punctures, disk apparently glabrous, apex ciliate and subrounded. Abdomen convex, polished; fifth sternite depressed laterally, center of base with a small, ill-defined, and transversely tumid area; sixth deeply and transversely sulcate, disk rugosely punctate. Claws almost like those of *Phytalus* but too widely cleft for that subgenus, the upper claw subapical and as long as, but thicker than, the apical claw; claw base obtusely dilated. Hind spurs free and slender; lower tibial margin immediately adjacent to the shorter spur extended into a short but very obvious pseudo-spur. First two hind tarsal segments subequal in length. Metasternum nearly glabrous and impunctate at middle, sides moderately densely punctured, the hair short and but little evident. Hind tarsus very slightly shorter than its tibia. Upper tooth of front tibia somewhat distant from the apical two.

Length, 10.5 mm. Width, 6 mm.

The unique male *type* (U.S.N.M. no. 54017) is from Rio San Juan, Dominican Republic, collected by G. S. Miller in March 1938. This species is abundantly distinct from all West Indian species known to me both in the external characters and in the male genitalia.

Phyllophaga (Phyllophaga) blackwelderi, n. sp. Fig. 4

Male.—Oblong oval, polished; testaceous, with the head, thorax, and legs rufotestaceous to piceotestaceous; pygidium, thorax, and elytra apparently glabrous. Clypeus with dense, coarse punctures; apex slightly emarginate, but little reflexed, the angles very broadly rounded. Front with coarse punctures and a few scattered short hairs, the punctures dense in part toward vertex but much sparser in the front half bordering the clypeal suture—vertex impunctate. Eyes large. Antenna 9-segmented, unicolorous testaceous club not quite equal to the funicle. Thorax with strong and entire basal margin; sides roundly dilated, coarsely crenate and with a few cilia in apical half, and entire in basal half; disk with coarse, regularly placed, moderately sparse punctures, the latter separated by one and one-half to three times their diameters; in some specimens the disk has a small and irregular median smooth area; angles obtuse and not well indicated. Elytron subrugose, punctures slightly more dense than on thorax; striae, other than sutural, scarcely indicated, the sutural stria later becoming obsolete before reaching the elytral apex. Pygidium convex, polished, with coarse, regularly placed, moderately dense punctures, the apex rounded and ciliate. Abdomen flat-

tened, polished, fifth sternite with coarse, setigerous punctures; sixth sternite three-fifths the length of fifth, base and apex carinate and the disk transversely flattened and punctate. Metasternum coarsely, densely punctate, the hair short and not very conspicuous. Front tibia tridentate, the teeth approximately equidistant. Hind spurs free and slender, the longest one and one-half times the length of the first tarsal segment, the latter being slightly shorter than the second. Claws widely cleft, approaching closely the *Phytalus*-type; the short but sharp triangular tooth is situated very slightly beyond the middle; claw base roundly dilated. Hind tarsus subequal to the tibia.

Female.—Antennal club equal to the preceding four segments; hind tibial spurs shorter and broader than in male; last segment of abdomen flattened as in male but a little longer, the basal carina broader and less obvious; first segment of hind tarsus a little shorter than in the male and the hind tarsus in some individuals a little shorter than the tibia. Otherwise as in the male.

Length, 9–12 mm. Width, 4.5–7 mm.

The *holotype* male (U.S.N.M. no. 54018) and 4 paratypes are from station 234, Santa Lucia, British West Indies, collected May 15, 1936, by Dr. R. E. Blackwelder. The *allotype* female and 19 additional paratypes have the same locality and collector but were taken at station 205 on March 27, 1936. The types are in the National Museum and designated paratypes are in the Saylor Collection.

The two sexes of this species are surprisingly alike, though they can be separated by giving attention to the details of the antennae, hind spurs, and abdomen. The species is not closely related to any described West Indian species. The only other species described from Santa Lucia is *brevipes* of Froelich (1792), which may not be a *Phyllophaga*, or even a rhizotrogid. In any event, *blackwelderi* differs from it in the femora being elongate and not "ovate-oblong," in the moderately tridentate not "profoundly dentate" front tibiae, and in the marginal base of the thorax, as well as in other details.

Phyllophaga (Phyllophaga) cneida, n. sp.

Fig. 3

Male.—Oblong-oval, testaceocastaneous; thorax slightly dull, the beetle otherwise shining above; pygidium elytra, and thorax glabrous. Clypeus short, transverse, with fine and dense punctures; apex moderately reflexed, scarcely emarginate at middle, the whole clypeal margin appearing very nearly semicircular. Front faintly impressed at middle, punctures coarser than those of clypeus, irregularly and rather sparsely placed. Antenna 9-segmented, club very slightly longer than the funicle. Thorax with complete basal marginal line, sides entire and ciliate, angles obtuse and fairly well marked; disk with moderate-sized, regularly placed punctures, separated by one and one-half to three times their diameters. Elytron with sutural stria obsolete apically and nearly so basally, otherwise unstriate; disk subrugose, with moderately dense, regularly placed punctures. Pygidium convex and polished, regularly, moderately densely, but not coarsely punctured. Abdomen slightly convex, polished; fifth sternite plane, sixth three-fourths the length of the fifth, and transversely impressed. Eyes large. Claw tooth situated very nearly at the middle, claw base hardly dilated. Second segment of hind tarsus not longer than the first. Metasternal hairs very short and relatively sparse.

Length, 9.7 mm. Width, 5 mm.

The male *holotype* (U.S.N.M. no. 54019) from Montserrat Island, West Indies, collected by H. G. Hubbard, is in the National Museum. A paratype male, from "Basse Terre, St. Kitts Island, March 26," remains in the Saylor Collection. This species appears to be most closely related to *blackwelderi* Saylor and is considerably smaller than *P. montserratensis* Arrow, the only other known species from the island. From *blackwelderi* the present species may be most easily separated by the strong medium (not subapical) tarsal tooth and also by the slightly different male genitalia.

Phyllophaga (Phyllophaga) bahama, n. sp.

Fig. 5

Male.—Subelongate, highly polished; color testaceous, the head, thorax, and legs rufotestaceous to rufopiceous; glabrous above. Clypeus with moderately dense and regularly placed punctures; apex widely and shallowly emarginate, angles broadly rounded, margin slightly reflexed. Front a little more sparsely punctate than the clypeus, the variolate punctures of moderate size. Antenna 9-segmented, club oval and equal to the preceding 4 segments. Thorax regularly, somewhat sparsely punctate, the umbilicate punctures separated by one to three times their diameters; base not margined; lateral margins evenly rounded, with a few cilia, not crenulate; hind angles broadly rounded and indicated only by a very slight point, front angles nearly rectangular. Elytron with sutural stria obsolete basally and apically, otherwise unstriate; disk subrugose, punctures of same size and a little more dense than those of the thorax. Pygidium convex, rugose, the moderately sized punctures dense and regularly placed, surface apparently glabrous. Abdomen convex, polished, nearly glabrous and very finely punctate at middle; fifth sternite with moderately dense punctures, the surface gradually declivous in apical half, which is flattened; sixth sternite three-fifths the length of the fifth, transversely impressed, and the surface very densely and not coarsely punctate. Claw with a short, stubby, median tooth, claw base not obviously dilated. First segment of the hind tarsus varying from as long as, to very slightly longer than, the second. Metasternal hairs moderately dense, but quite short.

Female.—Antennal club equal to either the 3 or 4 preceding segments; pygidium more flattened than in the male, and with or without very short hair; abdomen less convex, with the fifth sternite flat and the sixth slightly convex, the latter finely and moderately densely punctured in the apical three-fifths. Otherwise as in the male.

Length, 14–16 mm. Width, 8–9 mm.

The *holotype* male (U.S.N.M. no. 54020) and *allotype* female, from "Nassau, Bahama Island, West Indies," are in the National Museum. A second pair from the same locality are in the Saylor Collection. Four additional paratypes from "Mangrove Cay, Andros Island, Bahamas, coll. May-June 1917 by Wm. Mann," agree with the types in all respects; one pair of these paratypes is deposited in the collection of the American Museum of Natural History, from whence they came, and the other is in the Saylor Collection.

P. bahama is most closely related to *P. youngi* Cartwright from Florida, but may be separated by the smaller size and the different male genitalia. The close relationship of these two species and the fact that all their characters are closely similar to those of the West Indian type, rather than the mainland type of *Phyllophaga*, give added force to the opinions of both Cartwright and myself that *P. youngi* is not a very old Floridian species but rather a recent immigrant.

Phyllophaga (Phyllophaga) adjuntas, n. sp.

Fig. 1

Male.—Subelongate, wider behind; testaceous to rufotestaceous, the thorax and head more rufous; surface shining, head, thorax, and pygidium glabrous. Clypeus with sparse, regularly placed punctures; apex widely and shallowly emarginate, hardly reflexed, angles broadly rounded. Front with moderately dense, irregularly placed punctures, those at the center of apex slightly smaller, vertex impunctate. Antenna 9-segmented, club subequal to funicle, segments 5 and 6 of funicle transverse. Thorax with strong basal margin and wide apical margin; hind angles subrounded, front angles subangulate; disk with moderately fine and umbilicate punctures, separated by one to three times their diameters. Elytron subrugose, punctured like thorax but more densely so, the punctures densest near base. Pygidium convex, polished, fifth sternite with several coarse setigerous punctures at center. Sixth abdominal sternite a little shorter than the fifth, the basal half being a smooth but nearly flat process, widest at the middle where it is suddenly interrupted, thus forming two very blunt and dentate lobes; surface between apex, and basal and apical processes, transversely impressed and with fine punctures and sparse erect hairs, the entire sternite with a faint suggestion of a median longitudinal sulcus. Claw tooth a little stronger than apical one and situated a little beyond the middle, claw base obtusely dilated. Metasternal hair of moderate length and density. First two segments of hind tarsus subequal in length.

Female.—Antennal club equal to or slightly longer than the preceding 4 segments; sixth abdominal segment slightly convex, with fine and not dense setigerous punctures; first segment of hind tarsus shorter than the second. Otherwise as in the male.

Length, 13–15 mm. Width, 6–7 mm.

The *holotype* male from Isolina, Puerto Rico, collected on April 16, 1901, is in the United States National Museum (U.S.N.M. no. 54021). The *allotype* female and a paratype male, both from Adjuntas, Puerto Rico, collected May 2, 1917, at the "Fed. Exp. Station, Acc. no. 49, 1917," are in the American Museum of Natural History, whence they came as a loan for study.

P. adjuntas does not resemble closely any known West Indian species in the type of male genitalia; externally it resembles *P. citri* Smyth but differs from that species in the nonpruinose dorsal surface, the much longer male antennal club, and the quite different male sixth abdominal segment.

Phyllophaga (Phyllophaga) mandevillea, n. sp.

Fig. 9

Male.—Rufocastaneous; polished and glabrous above. Head with front convex and with a suggestion of a median longitudinal sulcus, and with rather coarse, variolate, and somewhat sparse punctures. Clypeus very short and transverse, the apical margin narrowly and very strongly emarginate, the emargination in connection with the strongly rounded angles giving the clypeus a distinctly bilobed appearance; disk coarsely and not densely punctate. Eyes large. Antennae 8-segmented, the club very slightly longer than the funicle; fourth segment twice the length of third, fifth segment transverse and about one-fourth as long as fourth. Thorax with the disk variolately punctate, the punctures moderately coarse but sparse, and separated by two or three times their diameters on the center of the disk, but closer at sides; base of thorax not margined at middle, front margin very weakly indicated but entire, sides roundly dilated and entire, with sparse and very short cilia; front and hind angles obtusely subangulate.

Scutellum impunctate. Elytron with coarse, variolate punctures, surface unstriate and subrugose; sutural stria not well indicated at middle and entirely obsolete basally and apically. Pygidium strongly convex, pruinose, with moderately dense, fine punctures, and short erect hair; apex subtruncate and ciliate. Abdomen polished, flattened at middle, coarsely punctured, and with sparse short hairs; fifth sternite slightly longer than fourth, middle of the apical margin with two sharp but short teeth separated from each other by a shallow emargination; sixth sternite as long as fifth, surface rugose, flattened, with coarse punctures and slightly carinate basal and apical marginal lines, each bearing a single row of rather long hairs. All claws short with the apical tooth rather strongly curved; middle tooth small, situated slightly basad from the middle and strongly inclined toward the base; basal dilation obtusely rounded. All tarsal segments with moderately dense hairy soles; first segment of each tarsus longer than the second. Front tibia strongly tridentate, the upper tooth slightly beyond the middle. Metasternum strongly, very densely, and umbilicately punctate, with very short procumbent hair; somewhat more sparsely punctate at middle. All tarsi longer than their tibiae. Apex of middle tibia with a strongly serrate margin; each lateral angle of the apex is somewhat prolonged into a slightly larger tooth.

Female.—Antennal club ovate, hardly equal to segments 3 to 5 combined; eyes smaller; clypeus larger than in male; pygidium more narrowed apically and the hairs longer; abdomen semiconvex and very coarsely punctate, with the apical margin of the fifth sternite plane; sixth abdominal segment slightly convex; hind tarsus distinctly shorter than the tibia; all other characters including the middle tibia, exactly as in the male.

Length, 11.5 to 13.5 mm. Width, 5.5 to 6.5 mm.

The *holotype* male, the *allotype* female, and a pair of paratypes are from Mandeville, Manchester, Jamaica, collected between November 16 and December 19, 1919, at altitudes between 2,131 and 2,250 feet. The holotype and allotype are deposited in the American Museum of Natural History and the paratypes in the Saylor Collection.

This species is most closely related to a species (from exactly the same locality in Jamaica) that is now in manuscript by M. W. Sanderson. From this species of Sanderson's the new species differs especially in having the third tarsal segment two and one-half times longer than wide (rather than only one-half longer than wide), the elytral punctures finer and evenly spaced (not confusedly punctate), the hairy "sole" of the tarsus much less dense, and the slightly different male genitalia. I am indebted to Dr. Sanderson for comparing my specimens with the type of his new species.

Phyllophaga (Phyllophaga) manchesterea, n. sp.

Fig. 7

Male.—Castaneous, shining, glabrous above. Head with front very coarsely, densely and variolately punctured, with a strong median, impressed, longitudinal sulcus. Clypeus short, the apex reflexed, narrowly and deeply emarginate and the angles rounded, the entire clypeus appearing bilobed; disk coarsely punctate. Antenna 8-segmented, club subequal to funicle; segments 3 and 4 moderately long, the fourth slightly longer than the preceding; fifth transverse. Thorax with disk variolately punctate, the punctures moderately coarse and separated by one to two times their diameters on the disk, much closer at sides and nearly contiguous at center of apex; base not margined at middle; front with strong marginal lines; sides roundly dilated, entire; angles obtrusely subangulate. Scutellum with several coarse

punctures. Elytron rugose, nonstriate on disk, the punctures coarse, variolate, and moderately dense, sutural stria obsolete basally and apically. Pygidium convex, slightly pruinose, with moderately dense and very coarse punctures, and apparently glabrous except for the row of hairs at apex. Abdomen slightly flattened, coarsely punctate, with scattered short hairs; fifth sternite coarsely punctate, apical margin evenly rounded; sixth sternite half as long as fifth, and transversely impressed. All claws of moderate length, each with a very small median tooth. Hind tibial spurs free, the longest longer than the first tarsal segment. First segment of hind tarsus shorter than the second; in the front and mid tarsi the first segment is equal in length to the second. Metasternum coarsely and very densely punctate at sides and very sparsely so at center, with short and hardly obvious hair. Front tibia tridentate, the upper tooth slightly beyond the middle in position; the middle tooth is distinctly closer to the apical than to the basal tooth.

Length, 9.5 mm. Width, 4 mm.

The unique male *type* is from Mandeville, Manchester, Jamaica, collected November 30 to December 4, 1919, at an altitude of 2,131 feet, and is deposited in the collection of the American Museum of Natural History, from where it was lent for study by Dr. R. E. Blackwelder.

P. manchesterea is nearest *P. mandevillea* in general relationships but differs especially in the smaller size, tarsal claws, much less pilose tarsi, pygidial and abdominal characters, and the coarser and denser puncturation. From Sanderson's new species it differs especially in having a median tarsal claw tooth that the former lacks.

NEW NAMES

Whereas the name *Listrochelus* can not be maintained as a genus by any set of characters yet discovered^{1,2} and must be considered as a subgenus of *Phyllophaga*, several specific names become homonyms, and new names are needed. Two are here proposed:

Phyllophaga (Phyllophaga) temaxa, new name

Lachnosterna parilis Bates, Biol. Cent. Amer. 2(2): 404. 1889. (Non *Listrochelus parilis* Bates, 1888, l.c., p. 172.)

Phyllophaga (Listrochelus) yaqui, new name

Listrochelus debilis Arrow, Ann. Mag. Nat. Hist. (ser. 10) 11: 145. 1933. (Non *Gynnis debilis* LeConte, 1856, non *Lachnosterna debilis* Horn, 1885.)

¹ SAYLOR, L. W. *Necessary changes in important rhizotrogid genera*. Rev. Ent. 7: 318-322. 1937.

² SAYLOR, L. W. *Revision of the beetles of the melolonthine subgenus Phytalus of the United States*. Proc. U. S. Nat. Mus. 86 (3048): 157-167. 1939.